

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated October 30, 2007 and the Office Communication dated August 1, 2008 have been received and their contents carefully reviewed. Applicants submit this Supplemental Amendment, which replaces the Amendment filed April 30, 2008.

Claims 2 and 11 are hereby amended. Claims 14-15 are hereby added. No new matter has been added. Accordingly, claims 1-15 are currently pending. Reexamination and reconsideration of the pending claims are respectfully requested.

The Office Action states that Applicants have not filed a certified copy of the 02/10008 application as required by 35 U.S.C. § 119(b). Applicants submit that the present application is a national phase application of PCT application No. PCT/FR2003/002456, filed August 4, 2003, which claims the benefit of French Patent Application No. 02/100008, filed August 6, 2002. A certified copy of the 02/10008 application was filed with the International Bureau as evidenced by the attached copy of Form PCT/IB/304.

The Office Action rejects claims 2 and 11 under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants have amended claims 2 and 11 and added claims 14-15 to more clearly define the subject matter. Applicants, therefore, respectfully request withdrawal of the rejection.

The Office Action rejects claims 1-5, 7, and 8 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent Application Publication No. 2002/0172850 to Asano et al. (*Asano*) in view of U.S. Patent No. 5,789,521 to Marrocco et al. (*Marrocco*). Applicants respectfully traverse the rejection.

As required in M.P.E.P. § 2143.03, in order to “establish *prima facie* obviousness of the claimed invention, all the limitations must be taught or suggested by the prior art.” The combined teaching of *Asano* and *Marrocco* fails to teach or suggest each and every element of claims 1-5, 7, and 8, and thus, cannot render these claims obvious.

Claim 1 recites, “a polymer, the skeleton of which consists of at least one phenylene repeating unit of formula (I) ... and ... at least one phenylene repeating unit of formula (II).” *Asano* does not disclose a phenylene repeating unit of formula II. Therefore, it cannot disclose a polymer consisting of both a phenylene repeating unit of formula I and a phenylene repeating unit of formula II. Similarly, *Marrocco* does not describe a phenylene repeating unit of formula I. Therefore, it cannot possibly teach a polymer consisting of both a phenylene repeating unit of formula I and a phenylene repeating unit of formula II.

Furthermore, in a recent chemical case, the Federal Circuit held that “in case[s] involving new chemical compounds, it remains necessary to identify some reason that would have led a chemist to modify a known compound in a particular manner to establish *prima facie* obviousness of a new claimed compound,” and “[t]he test for *prima facie* obviousness for chemical compounds is consistent with the legal principles enunciated in *KSR*.” *Takeda Chemical Industrial, Ltd. v. Alphapharm PTY, Ltd.*, 83 USPQ2d 1169, 492 F.3d 1350, 1356-1457, emphasis added. Even if the disclosure of *Asano* and *Marrocco* could be combined so as to teach the afore-mentioned claim limitation, the Office Action still fails to identify a practical reason why one of ordinary skill in the art would have combined *Marrocco* and *Asano*.

The Office Action states “*Asano et al.* and *Marrocco, III et al.* are combinable as they are concerned with the same field of endeavor, namely phenylene polymers.” *Office Action*, page 4, lines 5-6. Applicants respectfully disagree. “Phenylene polymers” is a very broad subject, and

the fact that *Marrocco* and *Asano* both disclose phenylene polymers does not put them in the same field of endeavor. The polymers of *Asano* and the polymers of *Marrocco* are synthesized and used for completely different purposes. *Asano* “relates to a polymer electrolyte membrane and to a solid polymer electrolyte fuel cell using the same.” *Asano*, ¶ 0002, emphasis added. The polymers described in *Marrocco* can “be used as self-reinforced engineering plastics, can be used in combination with flexible coiled polymer binders for the preparation of high tensile strength molecular composites and can be used as matrix resins for fiber-containing composites.” *Marrocco*, column 1, lines 21-25, emphases added. The polymers disclosed in *Asano* facilitate the flow of charged particles and the production of power in a fuel cell; they have nothing to do with strengthening and/or reinforcing plastic material. In contrast, the polymers disclosed in *Marrocco* involve reinforcing and/or strengthening materials; they have nothing to do with electrical conduction, power generation or fuel cells. Stated simply, the polymers disclosed in *Asano* and the polymers disclosed in *Marrocco* serve completely different purposes and solve completely different problems. Therefore, one of ordinary skill in the art would have had no reason to combine the polymers disclosed in *Asano* with the polymers disclosed in *Marrocco*.

Accordingly, claim 1 is allowable over the combined teaching of *Asano* and *Marrocco*. Claims 2-5, 7, and 8, and newly added claims 14-15 variously depend from claim 1. They are also allowable for at least the same reasons as claim 1. Applicants, therefore, respectfully request withdrawal of the rejection of claims 1-5, 7, and 8.

The Office Action rejects claims 1-5, 7, and 8 under 35 U.S.C. § 103(a) as being obvious over *Marrocco* in view of PCT Application Publication No. WO 01/70858 to Charnock et al. (*Charnock*). Applicants respectfully traverse the rejection.

Claim 1 recites, “a polymer, the skeleton of which consists of at least one phenylene repeating unit of formula (I) ...and ... at least one phenylene repeating unit of formula (II).” *Marrocco* does not disclose a phenylene repeating unit of formula I. Therefore, it cannot disclose a polymer consisting of both a phenylene repeating unit of formula I and a phenylene repeating unit of formula II. *Charnock* does not disclose either a phenylene repeating unit of formula I or a phenylene repeating unit of formula II. Accordingly, the combined teaching of *Marrocco* and *Charnock* fails to teach every element of at least claim 1. Claim 1, therefore, is allowable over the combined teaching of *Marrocco* and *Charnock*. Claims 2-5, 7, and 8, and newly added claims 14-15 variously depend from claim 1, and are also patentable over the combined teaching of *Marrocco* and *Charnock* for at least the same reasons as claim 1. Applicants, therefore, respectfully request withdrawal of the rejection of claims 1-5, 7, and 8.

The Office Action rejects claims 6, 9, and 10 under 35 U.S.C. § 103(a) as being obvious over *Asano* in view of *Marrocco*, and further in view of U.S. Patent No. 6,025,092 to Doyle et al. (*Doyle*). Applicants respectfully traverse the rejection.

As discussed, claim 1 is allowable over the combined teaching of *Asano* and *Marrocco*. *Doyle* fails to cure the afore-mentioned deficiencies in of *Asano* and *Marrocco*. In fact, *Doyle* is only cited for its teaching of the pendant acid. *Office Action*, page 5, lines 28-29. Further, *Doyle* relates to polyethylene, which is different from phenylene recited in claim 1. Accordingly, claim 1 is allowable over the combined teaching of *Asano*, *Marrocco*, and *Doyle*. Claims 6, 9, and 10, which variously depend from claim 1, are also allowable for at least the same reasons as claim 1. Applicants, therefore, respectfully request withdrawal of the rejection of claims 6, 9, and 10.

The Office Action rejects claims 1 and 11 under 35 U.S.C. § 103(a) as being obvious over Polymer Preprints, ACS 40(2): 567-568 to Bloom et al. (*Bloom*) in view of *Charnock*.

Applicants respectfully note that the Office Action only discusses the rejection of claim 11 and fails to address the rejection of claim 1. Therefore, the rejection of claims 1 and 11 appears to be flawed. Nevertheless, Applicants respectfully traverse the rejection of claims 1 and 11.

Again, claim 1 recites, “a polymer, the skeleton of which consists of at least one phenylene repeating unit of formula (I)...and ... at least one phenylene repeating unit of formula (II).” *Bloom* fails to teach or suggest at least these elements of claim 1. *Bloom* does not disclose a phenylene repeating unit of formula I. Therefore, it cannot disclose a polymer consisting of both a phenylene repeating unit of formula I and a phenylene repeating unit of formula II. *Charnock* fails to cure the deficiency in *Bloom* with respect to claim 1. *Charnock* is cited for allegedly “teaching the functional group as being on the claimed acids.” *Office Action*, page 6, lines 17-19. *Charnock* does not disclose either a phenylene repeating unit of formula I or a phenylene repeating unit of formula II. Accordingly, claim 1 is allowable over the combined teaching of *Bloom* and *Charnock*. Claim 11, which depends from claim 1, is allowable for at least the same reasons as claim 1. Applicants, therefore, respectfully request withdrawal of the rejection of claims 1 and 11.

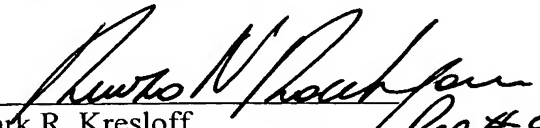
The application is in condition for allowance. Early and favorable action is respectfully solicited. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the

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Dated: August 5, 2008

Respectfully submitted,

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Date de publication internationale (jour/mois/année) Pas encore publiée	
Date du dépôt international (jour/mois/année) 04 août 2003 (04.08.03)	
Date de priorité (jour/mois/année) 06 août 2002 (06.08.02)	
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